GOVERNMENT OF ANDHRA PRADESH
ABSTRACT

Energy Department – Installation of Smart Meters and allied materials to the 18.58 lakhs Agricultural pump sets in the State - Administration Sanction – Orders – Issued.

ENERGY (POWER.I) DEPARTMENT

G.O.Rt.No.148 Dated: 05-12-2022.
Read the following: -

1. G.O.Ms.No.22, Energy (Power.I) Dept, dated:1-9-2020.
2. G.O.Rt.No.68, Energy (Power.I) Dept, dated:7-9-2020.
3. From the C&MD, APEPDCL, letter dated:11-07-2022.
4. From the Chairman & Managing Director, APSPDCL, letter dated:18-07-2022.
5. From the Chairman & Managing Director, APCPDL letter No.18-07-2022.
6. State Govt's letter No.ENE01-APPT/37/2022, dated:12-10-2022.
7. From the Chairman & Managing Director, APSPDCL, letter dated:21-10-2022.
8. From the Chairman & Managing Director, APEPDCL, letter dated:21-10-2022.
9. From the Chairman & Managing Director, APCPDCL, letter dated:21-10-2022.

ORDER:

In the G.O.1st read above, orders were issued implementing the Direct Benefit Transfer Scheme to the Agriculture Power supply to the farmers in the State and in the G.O.2nd read above, Government have notified the said Scheme as "Y.S.R. Uchita Vyavasaaya Vidyut Pathakam" in the State.

2. In the G.O.1st read above, it was also ordered that the DISCOMs will use smart meters wherever possible and Infrared Data Standard (IRDA) meters where smart meters cannot be used; and that the funds required for these will be paid by the Government in the form of subsidy along with the Electricity Bill and the DISCOMS will be responsible for fitting and repairing meters.

3. In the references 3rd, 4th and 5th read above, the CMDs of DISCOMs have informed that, Agricultural consumers in the state are being supplied power directly without any infrastructure such as earthing, meter box, service line, capacitors etc. The CMDs of DISCOMs have prepared the estimates considering the above and called for tenders and submitted the proposals to the Government for installation of meters and allied materials to the Agricultural Pump sets for an amount of Rs.6756.36 crores (Six thousand, seven hundred fifty six crores and thirty six lakhs) and requested the Government to accord administrative sanction for the said amount to meet the expenditure.

4. Government, after careful examination of the proposals in consultation with Finance Department and experts, have observed that the proposal needs to be examined and the most-effective metering strategy needs to be adopted, duly evaluating the options for installation of (a) IRD meters or (b) smart meters or (c) a mix of IRDA and Smart Meters, duly considering the relevant technical parameters, the findings of the Srikakulam pilot, the findings of field study conducted by Prayas, the issues related to network connectivity and the cost-effectiveness". Government have also observed that the amount of Rs.6480.21 crores, as per the DISCOMs bid, cannot

be the yard-stick since several crucial parameters were not examined and taken into consideration, besides the price discovery itself not having been formally completed as to become a valid reference rate and decided to cancel the earlier tenders, recast the estimates based on present Market rates.

5. Accordingly, in the reference 6th read above, the CMDs of DISCOMs have been directed to cancel the earlier tenders called for meters and allied materials and prepare fresh estimates for Smart Meters and Allied material as per norms of Central Electricity Authority(CEA)/Ministry of Power(MoP) with present Market Rates.

6. In the references 7th, 8th and 9th read above, CMDs of DISCOMs have submitted fresh estimates for Smart Meters and Allied Materials. The details of the estimates of the three DISCOMs are given below: -

A) ALLIED MATERIALS

Sl.No	Description of Item	Qty	Estimate Amount(Rs)
1	Supply of SMC (Sheet Moulding Compound Material (Fibre Glass reinforced polyester)) Box confirming to IS 13410:1992 of 510mm(H)X240mm(W)X180mm (D) Inner Dimensions with double door box with partition as per specification duly embossing YSR Uchita Vyavasaya Vidyuth Pathakam as per drawings including all accessories of SMC, suitable to accommodate 3 phase meters, 40A 3 pole MCCB and 3 Phase shunt capacitors with 2 holes of sufficient diameter for inlet and outlet Cables	1	4100.00
2	Component Fixing Boards suitable to fix in SMC box.	1	294.40
3	Back Clamp with 25X3 mm Hot Dip GI Flat - 2 Nos for 9.1/ 8 Mts. Pole	2	240.00
4	40A 3 pole MCCB confirming to IS	1	1363.20
5	Electroplated Spike Earthing 20 mm Dia 1.5 Mtrs Long with suitable Nut and Bolt.	1	310.85
6	GI Wire No. 8SWG	0.5KG	43.00
7	LT PVC Aluminium Cable (10 sq mm Twin Core & 10 Sq mm Single core)	15Mts	990.00
8	Hot Dip GI Flat 25X3mm Suitable to fix SMC Box with Back Clamp- 2 Nos	2	240.00
9	LT Capacitor: Supply, installation and commissioning of three phase delta connected 433V, 50 Hz outdoor type, self-healing, explosion proof metalized polypropylene LT fixed 3 Ph capacitors @ 3 KVAR per Service	1	799.79

10	M10 x 60 mm Galvanised Bolts, Nuts and Washers	0.5KG	60.00
	Total Financial Commitment (Approx)		**8441.24**
11	Storage and Transportation charges, Labour for Fixing of Smart Energy Meter in SMC Box, Fixing SMC Meter Box with Back Clamps to Pole, Fixing 40A TP MCCB to SMC Box, Fixing Capacitor to SMC Box/Motor Starter, Wiring from Over Head LT Line to Meter, Wiring from Meter to MCCB, Wiring from MCCB to Consumer Board and erection of Electroplated Spike earthing, Running of GI Wire No. 8 from Meter Box to Spike Earthing and Commissioning	1	1880.00
	Total for Material and Service		10321.24
	WWC @ 1%		103.21
	GST @ 18%		1876.40
	Total Cost in Rupees		**12300.85**
Total Cost for 11 Lakh Service Connections (Crores) - SPDCL		1100000	1353.09
Total Cost for 5 Lakh Service Connections (Crores) - CPDCL		500000	615.04
Total Cost for 2.58Lakh Service Connections (Crores) - EPDCL		258587	318.08
Total Cost for 18.58 Lakh Service Connections (Crores) - AP		**1858587**	**2286.22**

B) METERING

S. No.	Description	SMART METERS		SPDCL	CPDCL	EPDCL	Total
		Per Meter	for 18.58 Lakh Meters	11.00 Lakh	5.00 Lakh	2.58 Lakh	18.58 Lakh
Supply Part (A)		**INR**	**in Cr**	**in Cr**	**in Cr**	**in Cr**	**in Cr**
A-1	3-Ph 10-60 Amps Smart Energy Meters as per IS 16444 Part-1/ IS13779	6000.00	1115.15	660.00	300.00	155.15	1115.15
A-2	3-Ph (GSM/GPRS) Modem with Dis Connector						
Sub Total for Supply Part (A)		**6000.00**	**1115.15**	**660.00**	**300.00**	**155.15**	**1115.15**

Labour Part (B)							0.00
B-1	Labour Charges for Survey, GIS Mapping, Configuration and Integration and for 15% of the Manual meter readings can be collected through CMRI/ HHU/SBM/Bluetooth suitable for billing on par with online meter readings every month. 25Nos. readings per day per Person which are scattered at average 40KM per day. @ Rs. 30/- per reading.	775.00	144.04	85.25	38.75	20.04	144.04
Sub Total for Labour Charges Part (B)		**775.00**	**144.04**	**85.25**	**38.75**	**20.04**	**144.04**
HES, MDMS & MDAS Part (C)							
C-1	HES, MDAS and MDMS etc for 18.58 Lakh + services	3150.00	585.45	346.50	157.50	81.45	585.45
Sub Total for HES, MDMS & MDAS Part (C)		**3150.00**	**585.45**	**346.50**	**157.50**	**81.45**	**585.45**
Network, Operation and Maintenance Part (D)							
D-1	SIM Card Rentals @ Rs.50/- per month for 5-Years	3000.00	557.58	330.00	150.00	77.58	557.58
D-2	100 MBPS Network Connection at Both server and DISCOM: 2 Nos. Each (Both at Server and DISCOM end)	22.00	4.09	2.42	1.10	0.57	4.09
D-3	Operation & Maintenance cost(2% of A+C per Annum)	915.00	170.06	100.65	45.75	23.66	170.06
Sub Total for Operation and Maintenance Part (D)		**3937.00**	**731.73**	**433.07**	**196.85**	**101.81**	**731.73**
Total (A+B+C+D)		**13862.00**	**2576.37**	**1524.82**	**693.10**	**358.45**	**2576.37**

	Interest on Balance of A+B (@11% per annum) **(Rs. 6000+775-1800) = Rs.4975/-)**	1515.11	281.60	166.66	75.76	39.18	281.60
	wwc @ 1%	153.77	28.58	16.91	7.69	3.98	28.58
	GST @ 18%	2795.56	519.58	307.51	139.78	72.29	519.58
TOTAL PROJECT COST WITH TAXES (in INR Crores)		**18326.44**	**3406.13**	**2015.91**	**916.32**	**473.90**	**3406.13**
	Allied Materials		**2286.22**	**1353.09**	**615.04**	**318.08**	**2286.22**
	Allied + Meters - AP		**5692.35**	**3369.00**	**1531.36**	**791.98**	**5692.35**

7. The CMDs of DISCOMS have also stated that the Government of India is providing grant of Rs.1622.64 crores under RDSS Scheme for installation of Smart Meters to all 18.58 lakhs Agricultural Consumers in the State under YSR Uchita Vyavasaaya Vidyut Pathakam and requested the Government to provide budgetary support in the following manner to meet the expenditure:

S. No.	**Description**	**Qty. (Nos)**	**FY (2022-23) Rs.Crs.**	**FY (2023-24) Rs.Crs.**	**FY(2024-25) Rs.Crs.**	**FY (2025-26) Rs.Crs.**	**FY (2026-27) Rs.Crs.**	**FY (2027-28) Rs.Crs.**	**Total Cost Rs.Crs.**
1	Allied Materials - CAPEX	18,58,587	571.55	1714.67					**2286.22**
2	Meter-OPEX	18,58,587	150.37	601.48	601.48	601.48	601.48	451.11	**3007.42**
3	Meter-CAPEX	18,58,587	99.68	299.03					**398.71**
TOTAL Cost			**821.60**	**2615.18**	**601.48**	**601.48**	**601.48**	**451.11**	**5692.35**
4	Grant to be received from RDSS (MoP) - Meter	18,58,587	62.73	188.18					**250.91**
5	Grant to be received from RDSS (MoP) - Allied Materials	18,58,587	342.93	1028.80					**1371.73**
	Total Grant		405.66	1216.98					**1622.64**

Net Receivable from GoAP		**415.94**	**1398.20**	**601.48**	**601.48**	**601.48**	**451.11**	**4069.71**

8. Government, after careful examination of the entire matter and the certificates given by the three DISCOMs to the effect that *"the estimates for Smart Meters and allied materials for installation of meters to Agricultural connections were prepared with utmost due diligence after considering the prevailing market rates and the existing Central Electricity Authority regulations/guidelines issued by the Government of India and allied material required as per the regulations/guidelines issued by the Govt of India/CEA"*, hereby accord administrative approval for an amount of Rs.5692.35 Cr (Rupees Five thousand Six Hundred Ninety two crores and thirty five lakhs only.) with a financial commitment on the State Government of Rs. 4069.71 Crores (Rupees Four Thousand Sixty nine Crores and Seventy one lakhs only) and grant under RDSS scheme of Government of India of Rs.1622.64 Crores (Rupees Sixteen Hundred twenty two crores and sixty four lakhs) for installation of Smart Energy Meters to all 18.58 lakhs Agricultural Consumers in the State under YSR Uchita Vyavasaaya Vidyut Pathakam. Discom-wise breakup is annexed to this order.

9. The Chairman and Managing Directors, APSPDCL/APEPDCL/ APCDPCL shall take further necessary action accordingly.

10. This order issues with the concurrence of Finance Dept vide their U.O.No.FIN01-FMU0ASD(IIE)/20/2021-FMU-IIEIC(Computer No:1417299) dt:5-12-2022.

(BY ORDER AND IN THE NAME OF THE GOVERNOR OF ANDHRA PRADESH)

K.VIJAYANAND
SPECIAL CHIEF SECRETARY TO GOVERNMENT

To
The Chairman & Managing Directors,
APSPDCL/APEPDCL/APCPDCL, Tirupati/Visakhapatnam/Vijayawada.
The Chairman & Managing Director,
APTRANSCO, Vijayawada.
The Member Convenor, APPCC, Vijayawada.
Copy to:
The Commission Secretary,
Andhra Pradesh Electricity Regulatory Commission,
Red Hills, Hyderabad.
The Finance Department.
The OSD to Minister, Energy, EFS & T, Mines and Geology.
The Secretary to Chief Minister.
The P.S to Special Chief Secretary to Government, Energy Dept.
SF/SC.

//FORWARDED:: BY ORDER//

SECTION OFFICER

(Annexure to the G.O.Rt.No.148 Energy (Power.I) Dept, dated:05-12-2022)

1. **APSPDCL**

S. No.	Description	Qty. (Nos)	FY (2022-23) Rs.Crs.	FY (2023-24) Rs.Crs.	FY(2024-25) Rs.Crs.	FY (2025-26) Rs.Crs.	FY (2026-27) Rs.Crs.	FY (2027-28) Rs.Crs.	Total Cost Rs.Crs.
1	Allied Materials - CAPEX	11,00,000	338.27	1014.82	0.00	0.00	0.00	0.00	**1353.09**
2	Meter-OPEX	11,00,000	89.00	355.99	355.99	355.99	355.99	266.99	**1779.93**
3	Meter-CAPEX	11,00,000	59.00	176.98	0.00	0.00	0.00	0.00	**235.98**
TOTAL Cost			**486.26**	**1547.79**	**355.99**	**355.99**	**355.99**	**266.99**	**3369.00**
4	Grant received from RDSS (MoP) - Meter	11,00,000	37.13	111.38	0.00	0.00	0.00	0.00	**148.50**
5	Grant received from RDSS (MoP) - Allied Materials	11,00,000	202.96	608.89	0.00	0.00	0.00	0.00	**811.86**
	Total Grant		240.09	720.27	0.00	0.00	0.00	0.00	**960.36**
Net Receivable from GoAP			**246.17**	**827.52**	**355.99**	**355.99**	**355.99**	**266.99**	**2408.65**

2.APCPDCL

S. No.	Description	Qty. (Nos)	FY (2022-23) Rs.Crs.	FY (2023-24) Rs.Crs.	FY(2024-25) Rs.Crs.	FY (2025-26) Rs.Crs.	FY (2026-27) Rs.Crs.	FY (2027-28) Rs.Crs.	Total Cost Rs.Crs.

1	Allied Materials - CAPEX	5,00,000	153.76	461.28	0.00	0.00	0.00	0.00	**615.04**
2	Meter-OPEX	5,00,000	40.45	161.81	161.81	161.81	161.81	121.36	**809.06**
3	Meter-CAPEX	5,00,000	26.82	80.45	0.00	0.00	0.00	0.00	**107.26**
TOTAL Cost			**221.03**	**703.54**	**161.81**	**161.81**	**161.81**	**121.36**	**1531.36**
4	Grant received from RDSS (MoP) - Meter	5,00,000	16.88	50.63	0.00	0.00	0.00	0.00	**67.50**
5	Grant received from RDSS (MoP) - Allied Materials	5,00,000	92.26	276.77	0.00	0.00	0.00	0.00	**369.03**
	Total Grant		109.13	327.39	0.00	0.00	0.00	0.00	**436.53**
Net Receivable from GoAP			**111.90**	**376.15**	**161.81**	**161.81**	**161.81**	**121.36**	**1094.84**

3.APEPDCL

S. No.	Description	Qty. (Nos)	FY (2022-23) Rs.Crs.	FY (2023-24) Rs.Crs.	FY(2024-25) Rs.Crs.	FY (2025-26) Rs.Crs.	FY (2026-27) Rs.Crs.	FY (2027-28) Rs.Crs.	Total Cost Rs.Crs.
1	Allied Materials - CAPEX	2,58,587	79.52	238.56	0.00	0.00	0.00	0.00	**318.08**
2	Meter-OPEX	2,58,587	20.92	83.68	83.68	83.68	83.68	62.76	**418.42**
3	Meter-CAPEX	2,58,587	13.87	41.60	0.00	0.00	0.00	0.00	**55.47**
TOTAL Cost			**114.31**	**363.85**	**83.68**	**83.68**	**83.68**	**62.76**	**791.98**
4	Grant received from RDSS (MoP) - Meter	2,58,587	8.73	26.18	0.00	0.00	0.00	0.00	**34.91**
5	Grant received from RDSS (MoP) - Allied Materials	2,58,587	47.71	143.14	0.00	0.00	0.00	0.00	**190.85**
	Total Grant		56.44	169.32	0.00	0.00	0.00	0.00	**225.76**
Net Receivable from GoAP			**57.87**	**194.53**	**83.68**	**83.68**	**83.68**	**62.76**	**566.22**

4. Grant Total.

S. No.	Description	Qty. (Nos)	FY (2022-23) Rs.Crs.	FY (2023-24) Rs.Crs.	FY(2024-25) Rs.Crs.	FY (2025-26) Rs.Crs.	FY (2026-27) Rs.Crs.	FY (2027-28) Rs.Crs.	Total Cost Rs.Crs.
1	Allied Materials - CAPEX	18,58,587	571.55	1714.67					**2286.22**
2	Meter-OPEX	18,58,587	150.37	601.48	601.48	601.48	601.48	451.11	**3007.42**
3	Meter-CAPEX	18,58,587	99.68	299.03					**398.71**
TOTAL Cost			821.60	2615.18	601.48	601.48	601.48	451.11	**5692.35**
4	Grant received from RDSS (MoP) - Meter	18,58,587	62.73	188.18					**250.91**
5	Grant received from RDSS (MoP) - Allied Materials	18,58,587	342.93	1028.80					**1371.73**
	Total Grant		405.66	1216.98					**1622.64**
Net Receivable from GoAP			**415.94**	**1398.20**	**601.48**	**601.48**	**601.48**	**451.11**	**4069.71**

K.VIJAYANAND
SPECIAL CHIEF SECRETARY TO GOVERNMENT

//FORWARDED:: BY ORDER//

SECTION OFFICER

Signed by Sudarsana Raju Chikile
Date: 06-12-2022 11:35:53
Reason: Approved